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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 4
ITAAC Closure Notification on Completion of ITAAC 2.3.10.07a.ii [Index Number 444]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) 2.3.10.07a.ii [Index Number 444], to verify that specified controls and indications are available in the Main Control Room (MCR), the containment sump level sensitivity is met, specified check valves perform their functions, and that a simulated high radiation signal will close the discharge control isolation valve. The closure process for this ITAAC is based on the guidance described in NEI 08-01, “Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52”, which is endorsed by the NRC in Regulatory Guide 1.215.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Kelli Roberts at 706-848-6991.

Respectfully submitted,

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Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4
Completion of ITAAC 2.3.10.07a.ii [Index Number 444]

JMC/TJC/sfr

cc: Regional Administrator, Region ll
Director, Office of Nuclear Reactor Regulation (NRR)
Director, Vogtle Project Office NRR
Senior Resident Inspector – Vogtle 3 & 4

Southern Nuclear Operating Company
ND-23-0443
Enclosure

Vogtle Electric Generating Plant (VEGP) Unit 4
Completion of ITAAC 2.3.10.07a.ii [Index Number 444]

ITAAC Statement

Design Commitment:

7.a) The WLS provides the nonsafety-related function of detecting leaks within containment to the containment sump.

7.b) The WLS provides the nonsafety-related function of controlling releases of radioactive materials in liquid effluents.

8. Controls exist in the MCR to cause the remotely operated valve identified in Table 2.3.10-3 to perform its active function.

9. The check valves identified in Table 2.3.10-1 perform an active safety-related function to change position as indicated in the table.

10. Displays of the parameters identified in Table 2.3.10-3 can be retrieved in the MCR.

Inspection, Tests, Analyses:

i) Inspection will be performed for retrievability of the displays of containment sump level channels WLS-034, WLS-035, and WLS-036 in the MCR.

ii) Testing will be performed by adding water to the sump and observing display of sump level.

Tests will be performed to confirm that a simulated high radiation signal from the discharge radiation monitor, WLS-RE-229, causes the discharge isolation valve WLS-PL-V223 to close.

Stroke testing will be performed on the remotely operated valve listed in Table 2.3.10-3 using controls in the MCR.

Exercise testing of the check valves with active safety functions identified in Table 2.3.10-1 will be performed under pre-operational test pressure, temperature and flow conditions.

Inspection will be performed for retrievability of the displays identified in Table 2.3.10-3 in the MCR.

Acceptance Criteria:

i) Nonsafety-related displays of WLS containment sump level channels WLS-034, WLS-035, and WLS-036 can be retrieved in the MCR.

ii) A report exists and concludes that sump level channels WLS-034, WLS-035, and WLS-036 can detect a change of 1.34 ± 0.5 inches.

A simulated high radiation signal causes the discharge control isolation valve WLS-PL-V223 to close.

Controls in the MCR operate to cause the remotely operated valve to perform its active function.

Each check valve changes position as indicated on Table 2.3.10-1.

Displays identified in Table 2.3.10-3 can be retrieved in the MCR.

ITAAC Determination Basis

Multiple ITAAC were performed to verify the Liquid Radwaste System (WLS) provides the nonsafety-related function of detecting leaks within containment to the containment sump by inspecting for the retrievability of the containment sump level channels in the MCR and testing to demonstrate that the containment sump level instruments can detect and display a sump level change of 1.34 ±0.5 inches. This ITAAC also confirms that the WLS provides the nonsafety-related function of controlling the release of radioactive materials in liquid effluents by testing to ensure the discharge control valve WLS-PL-V223 closes when a high radiation signal is simulated. This ITAAC ensures controls exist and operate in the Main Control Room (MCR) to cause the remotely operated valves in Combined License (COL) Appendix C Table 2.3.10-3 (Attachment C) to perform the active function and that the check valves in COL Table 2.3.10-1 (Attachment A) perform their active function to change position as listed in the table. Additionally, an inspection is performed to ensure the displays of the parameters identified in COL Table 2.3.10-3 (Attachment B) can be retrieved in the MCR.

i) Nonsafety-related displays of WLS containment sump level channels WLS-034, WLS-035, and WLS-036 can be retrieved in the MCR.

An inspection was performed for Unit 4 in accordance with component test package listed in Reference 1. The test procedure verified the non-safety related displays of WLS containment sump level channels WLS-034, WLS-035, and WLS-036 are retrievable in the MCR.

Reference 1 documents the retrieval of the containment sump level indicating channels (WLS-034, WLS-035, and WLS-036) from a MCR console and verifies and documents the indication is displayed.

The results of this inspection as documented in Reference 1 confirm that for Unit 4 the nonsafety-related displays of WLS containment sump level channels WLS-034, WLS-035, and WLS-036 can be retrieved in the MCR.

ii) A report exists and concludes that sump level channels WLS-034, WLS-035, and WLS-036 can detect a change of 1.34 ± 0.5 inches.

Testing was performed for Unit 4 in accordance with component test package listed in Reference 3 to verify that sump level channels WLS-034, WLS-035, and WLS-036 can detect a change of 1.34 ± 0.5 inches.

Reference 3 documented testing of sump level channels which commenced by recording the initial sump level measurement locally and using WLS-034 indication in the MCR. A demineralized water source is used to increase the containment sump level by 1.34 inches as measured locally. The local level is compared to WLS-034 indication in the MCR and the difference was verified to be ≤ 0.5 inches. This verified WLS-034 can detect a change in containment sump level of 1.34 inches ± 0.5 inches. This testing was repeated for the remaining containment sump level channels WLS-035 and WLS-036.

The completed test results as documented in Reference 3 demonstrates that for Unit 4, a report exists and concludes sump level channels WLS-034, WLS-035, and WLS-036 can detect a change of 1.34 ± 0.5 inches.

A simulated high radiation signal causes the discharge control isolation valve WLS-PL-V223 to close.

Testing was performed for Unit 4 in accordance with component test package listed in Reference 2 to verify that a simulated high radiation signal causes the discharge control isolation valve WLS-PL-V223 to close.

Testing was performed as documented in Reference 2 by verifying WGS-PL-V223 is initially open. The test simulated a high radiation signal from the discharge radiation monitor. WGS-PL-V223 was verified to close on the Plant Control System (PLS) monitor in the Main Control Room and verification is documented in the component test package.

This testing as documented in Reference 2 verified that for Unit 4 a simulated high radiation signal causes the discharge control isolation valve WGS-PL-V223 to close.

Controls in the MCR operate to cause the remotely operated valve to perform its active function.

Testing was performed for Unit 4 in accordance with component test package listed in Reference 1 to verify that controls in the MCR operate to cause the remotely operated valve (Attachment C) to perform its active function.

Testing commenced as documented in Reference 1 at one of the MCR consoles. WLS-PL-V223 was opened using Plant Control System (PLS) controls, verified to be open locally, closed using PLS controls and verified to be closed locally.

The results of this testing as documented in Reference 1 confirmed that for Unit 4, the controls in the MCR operate to cause the remotely operated valve to perform its active function.

Each check valve changes position as indicated on Table 2.3.10-1.

Testing was performed for Unit 4 in accordance with component test package listed in Reference 3 to verify each check valve changes position as indicated on Attachment A.

Testing documented in Reference 3 verified that the check valve testing began by pouring water into the Chemical and Volume Control System (CVS) compartment floor drain and verifying the proper level rise in the containment sump. This verified that the drain line check valves (WLS-V071A and V072A) partially opened. Then a blank flange is installed downstream of both check valves, test connection caps are removed, and a water hose with an inline flowmeter and pressure gauge is connected to the test connection between the blank flange and WLS-V072A. The line is pressurized and when flowrate has stabilized, the pressure and leakage are recorded. The flow rate is verified to be < 2 gpm and this verifies that check valve WLS-V072A has closed. The water hose is then moved to the test connection between the two check valves and pressurized. When the pressure and flowrate stabilize, pressure and flowrate are recorded. The flow rate is verified to be < 2 gpm and this verifies that check valve WLS-V071A has closed. This methodology was repeated for the two remaining drain lines and associated check valves. This system is depicted in Piping and Instrumentation Diagram, Liquid Radwaste System WLS-M6-001 (Reference 4).

The completed test results as documented in Reference 3 verified for Unit 4 that each check valve changes position as indicated on Table 2.3.10-1.

Displays identified in Table 2.3.10-3 can be retrieved in the MCR.

An inspection was performed for Unit 4 in accordance with component test package listed in Reference 1. This component test package verified the displays identified in Attachment B can be retrieved in the MCR.

Reference 1 documents the retrieval of the displays identified in Attachment B from a MCR console, verifies and documents the indication is displayed.

The completed Unit 4 component test results as documented in Reference 1 confirmed that the displays identified in Table 2.3.10-3 can be retrieved in the MCR.

References 1 through 4 are available for NRC inspection as part of the ITAAC 2.3.10.07a.ii Completion Package (reference 5).

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found there are no relevant ITAAC findings associated with this ITAAC. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.3.10.07a.ii (Reference 5) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.3.10.07a.ii was performed for VEGP Unit 4 and that the prescribed acceptance criteria were met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

References (available for NRC inspection)

1. SV4-WLS-ITR-800444, “Unit 4 Liquid Radwaste System WLS Items 7a, 8, and 10: ITAAC 2.3.10.07a.ii,NRC Index Number: 444”
2. SV4-WLS-ITR-801444, “Unit 4 Liquid Radwaste System WLS Release Isolation: ITAAC 2.3.10.07a.ii, Item 7b, NRC Index Number: 444”
3. SV4-WLS-ITR-802444, “Unit 4 Liquid Radwaste System WLS Leak Detection and Check Valve Function: ITAAC 2.3.10.07a.ii, Items 7.a.ii and 9, NRC Index Number: 444”
4. SV4-WLS-M6-001, Rev. 4, “PIPING AND INSTRUMENTATION DIAGRAM LIQUID RADWASTE SYSTEM”
5. 2.3.10.07a.ii-U4-CP-Rev0, ITAAC Completion Package

Attachment A

*Excerpt of COL Appendix C Table 2.3.10-1

*Equipment Name	*Tag No.	*Active Function
WLS Drain from Passive Core Cooling System (PXS) Compartment A (Room11206) Check Valve	WLS-PL-V071B	Transfer Closed
WLS Drain from PXS Compartment A (Room 11206) Check Valve	WLS-PL-V072B	Transfer Closed
WLS Drain from PXS Compartment B (Room 11207) Check Valve	WLS-PL-V071C	Transfer Closed
WLS Drain from PXS Compartment B (Room 11207) Check Valve	WLS-PL-V072C	Transfer Closed
WLS Drain from Chemical and Volume Control System (CVS) Compartment (Room 11209) Check Valve	WLS-PL-V071A	Transfer Closed
WLS Drain from CVS Compartment (Room 11209) Check Valve	WLS-PL-V072A	Transfer Closed

Attachment B

*Excerpt of COL Appendix C Table 2.3.10-3

*Equipment Name	*Tag No.	*Display
Reactor Coolant Drain Tank Level	WLS-JE-LT002	Yes
Letdown Flow from CVS to WLS	WLS-JE-FT020	Yes
WLS Auxiliary Building RCA Floodup Level Sensor	WLS-400A	Yes
WLS Auxiliary Building RCA Floodup Level Sensor	WLS-400B	Yes

Attachment C

*Excerpt of COL Appendix C Table 2.3.10-3

*Equipment Name	*Tag No.	*Active Function
WLS Effluent Discharge Isolation Valve	WLS-PL-V223	Close